



Hanford Implementation of 10 CFR 830

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Packaging Management Council Meeting

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10 CFR 830

- **Nuclear Facility Hazard Categorization – Cat 1, 2, 3**
 - *Hanford is asking for an exemption from DOE Standard 1027-92 change 1*
- **Safety Documentation (3009 SAR)**
 - *Hanford is using the DOE Order 460.1A safe harbor and will be issuing a Hanford Site wide Transportation Safety Document (TSD)*
- **Issuance of TSRs**
 - *Hanford will have TSRs in the Site wide TSD, TSRs will address package performance through criticality control, containment, and other performance characteristics in the transport environment*
- **USQ Process**
 - *Hanford will implement a “USQ-like” process for onsite transportation safety in the Site wide TSD*

Categorization

	Packaging	DOE Standard 1027
	1) DOT/DOE/NRC Packaging 2) DOT Equivalent Packaging 3) DOT Non-Equivalent Packaging	Category 1 Category 2 Category 3
Categorization	Defines payload limitations and packaging performance requirements.	Only one of the factors used to determine rigor and level of detail required in analysis (thickness of supporting data).
Basis of Categorization	Considers all nine DOT hazard classes. Class 7 is radioactive material, which is further defined in quantity categories based on radionuclides, activity concentration, total activity and physical and chemical form(LQ, LSA/SCO, Type A, Type B and HRCQ). Each with different packaging performance standards.	Considers radioactive material only looking at total inventory.
Results of Categorization	<u>Number 1 and 2</u> determines packaging and transport hazards and requires meeting national and international standards (1) or Hanford Standards (2). Performance Based) <u>Number 3</u> uses a combination of performance and risk based criteria.	Determines applicability of other parts of the process (accident analysis, hazard controls, TSRs and USQ application.

TSD vs Facility SB Comparison

	Transportation Safety	Facility Safety Basis	Hanford TSD Approach
Methodology	Performance Based. Based on normal transport and accident conditions (national and international standards)	Risk Based	Mixture of Performance and Risk Based
Categorization	Use DOT characterization and hazard classification	Nuclear Facility Categorization Cat 1, 2, 3	Use DOT characterization and hazard classification
Documentation	DOT/DOE/NRC documents (Engineering and test reports, SARPs or TERs and CoCs).	DSA (SAR, BIO, etc.)	Transportation Safety Document (TSD) based on safe harbor and Onsite SARP
Controls	Hazard controls based on hazard class/division, packing group, RAM category, Fissile class, etc.	TSRs with specified format and content	TSR like requirements in the TSD
Configuration	Changes submitted to responsible federal agency or as authorized in Federal regulations	USQ Process	USQ Like Process. Modified configuration control process. Graded approach.

BIO - Basis of Interim Operations

LSA - Low Specific Activity

SB - Safety Basis

SCO - Surface Contaminated Object

HRCQ - Highway Route Controlled Quantity

SARP - Safety Analysis Report for Packaging

TSD - Transportation Safety Document

LQ - Limited Quantity

TERs - Test and Evaluation Reports



Hanford's New – Site Wide Transportation Safety Document

- **Targeted for completion and release by September 2001**
- **Will apply to all Hanford Prime Contractors and Major Subs under DOE RL and DOE ORP**
- **Expect transition period to new standards and site requirements**
- **Not expected to be major impact on Hanford Project mission or milestones**